

REMARKS

Claims 1 and 4-10 were stated to be pending when an Office Action (Paper No. 15) was mailed on March 29, 2004. The Office Action was made Final. Claims 1 and 4-8 were rejected under 35 U.S.C. § 103. Claims 9 and 10 were objected to as being dependent upon a rejected base claim, but were indicated as being allowable. The Examiner is thanked for indication of allowable subject matter. Status of previously presented Claims 11 and 12 was not indicated in the Office Action.

In light of arguments set forth herein, Applicants very respectfully submit that all claims now pending in this patent application – including previously presented Claims 11-12 -- are in condition for allowance. Applicants very respectfully request reconsideration and allowance of all claims pending in this patent application.

I. REJECTION UNDER 35 U.S.C. § 103

Claims 1 and 5-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,936,552 to Wichgers et al. in view of U.S. Patent No. 5,781,146 to Frederick; Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wichgers et al. in view of Frederick and U.S. Patent No. 4,224,669 to Brame; Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wichgers et al. in view of Frederick and U.S. Patent No. 4,796,190 to Cummings. Each of these rejections will be discussed in turn.

A. CLAIMS 1 AND 5-7

Claims 1 and 5-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,936,552 to Wichgers et al. in view of U.S. Patent No. 5,781,146 to Frederick. The Office Action stated that Wichgers et al. discloses a flight display for aircraft for displaying pictorial representation of aircraft 36 in plan view and/or aircraft 48 in profile view, including terrain elevations, except for specifically having width and lengths of specific size and an altitude reference scale. The Office Action also stated that choosing to have displays represent specific

range values would have been obvious in order to only obtain terrain data relative to a flight path of interest. The Office Action further stated that Frederick teaches desirability of displaying an altitude scale adjacent a view of aircraft location with respect to terrain elevation. The Office Action set forth the position that it would have been obvious to display altitude scale adjacent a display showing aircraft position with respect to terrain height in order to allow a pilot to know more specifically how high terrain was in case it was necessary to navigate around it. Applicants respectfully traverse.

1. THE CITED REFERENCES

Wichgers et al. discloses an integrated horizontal and profile terrain display format for situational awareness. A terrain situational awareness system employs a display format that is stated to enhance a crew's situational awareness of terrain hazards and man-made obstacles. The terrain awareness system employs positional data and a terrain database to provide visual information and warning. The display integrates both horizontal and profile perspectives of potential hazards. According to Wichgers et al., a crew will instantaneously know whether their path, within the vehicle's operational envelope is safe. *See* Wichgers et al., column 2, line 66 – column 3, line 27.

Wichgers et al. discloses that “[t]errain profile 52 depicts the vertical terrain elevation profile of the path *directly in front of the aircraft*. The terrain profile 52 of lower portion 34 is taken *along the vertical dashed line 40* of upper portion 32.” *Id.*, column 6, lines 52-55 (emphasis supplied); *See Id.*, Figure 3.

Frederick discloses a weather radar and terrain display map display system for aircraft. Terrain elevation and weather information are displayed simultaneously. According to Frederick, “[a] *constant band of voxels 521 ahead of the aircraft 523 will maintain a constant relationship with the aircraft* and will move with the aircraft relative to terrain. The pilot can select the transverse length 525 of the band...and the distance between the *constant band* and the aircraft 529.” Frederick, column 10, lines 37 – 41 (emphasis supplied); *See Id.*, Figure 5a.

2. A PRIMA FACIE CASE OF OBVIOUSNESS HAS NOT BEEN ESTABLISHED

Applicants very respectfully submit that a *prima facie* case of obviousness has not been established because the combination of the cited references does not teach or suggest the claimed invention.

As discussed above, Wichgers et al. depicts the vertical terrain elevation profile of the path directly in front of the aircraft taken along the vertical dashed line 40 of upper portion 32 (Figure 5a). This depiction is precisely the type of prior art flight deck display discussed in the “Background of the Invention” section of Applicants’ patent application:

For flight deck displays that show the terrain directly in front of the aircraft, the input for this type of device may be a database of topography information that generates a display based on information from the aircraft’s navigational equipment. However, the display changes with slight adjustments to the direction of the aircraft, making it appear ‘noisy’. Also, navigational instruments for determining the exact position of an aircraft usually have some degree of error. For example, if the aircraft’s automated navigational equipment is only accurate to within 10 nautical miles of the exact location of the aircraft, and the topography display only shows a ‘line’ of topography directly in front of where the aircraft instruments indicate the aircraft is located, the topography display will not be accurate as to the topography directly in front of the aircraft if the aircraft’s exact position is actually 9.5 nautical miles from the location indicated by the navigation equipment. U.S. Patent Application 10/019,459, p. 2, lines 11-24.

Applicants respectfully submit that the display taken along a line of Wichgers et al. does not teach or suggest “a pictorial representation to scale of a profile of highest elevations of a swath of terrain along the path area, a width of the swath widening as distance from the aircraft increases” as claimed in Claim 1, as amended.

Applicants also respectfully submit that the constant band of voxels 521 ahead of the aircraft 523 of Frederick does not teach or suggest “a pictorial representation to scale of a profile of highest elevations of a swath of terrain along the path area, a width of the swath widening as

distance from the aircraft increases” as claimed in Claim 1, as amended. Therefore, Frederick does not overcome the above-identified deficiency of Wichgers et al.

Applicants therefore respectfully submit that the combination of Wichgers et al. and Frederick does not teach or suggest “a pictorial representation to scale of a profile of highest elevations of a swath of terrain along the path area, a width of the swath widening as distance from the aircraft increases” as claimed in Claim 1, as amended. Because the combination of Wichgers et al. and Frederick does not teach or suggest the claimed invention, Applicants respectfully submit that a *prima facie* case of obviousness has not been established. Accordingly, Applicants respectfully submit that claim 1, as amended, is not obvious and is patentable over the combination of Wichgers et al. and Frederick.

Claims 5-7 depend from Claim 1. By virtue of their dependency and for other reasons, Applicants respectfully submit that Claims 5-7 are not obvious and are patentable over the combination of Wichgers et al. and Frederick.

Accordingly, Applicants respectfully request entry of the Amendment, and reconsideration and allowance of Claims 1 and 5-7.

B. CLAIM 8

Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wichgers et al. in view of Frederick and U.S. Patent No. 4,224,669 to Brame. Claim 8 has been cancelled and the limitations of Claim 8 have been incorporated into allowable Claim 9, thereby rendering moot the rejection of Claim 8.

C. CLAIM 4

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wichgers et al. in view of Frederick and U.S. Patent No. 4,796,190 to Cummings. Claim 4 has been cancelled, thereby rendering moot the rejection of Claim 4.

II. OBJECTION TO CLAIMS 9-10

The Office Action objected to Claims 9-10 as being dependent upon a rejected base claim, but indicated that Claims 9-10 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner is thanked for indication of allowable subject matter.

Claims 9-10 depend from Claim 1. For the reasons discussed above, Applicants respectfully submit that Claim 1, as amended, is allowable over the cited references. Because of their dependency from Claim 1 that is submitted to be allowable, Applicants respectfully submit that the objection to Claims 9-10 has been overcome. Applicants very respectfully request entry of the Amendment, and reconsideration and allowance of Claims 9-10.

III. PREVIOUSLY PRESENTED CLAIMS 11-12

In addition to Claims 5-10, Claims 11-12 were presented in Applicants' response filed May 22, 2003. Claims 11-12 (as well as Claims 5-10) have been indicated in Applicants' responses filed January 12, 2004, and March 1, 2004, as being previously presented. However, only claims 1 and 4-10 were indicated by the Office Action as pending in the patent application. Applicants have again indicated in the Claims section of this Response that Claims 11 and 12 are "Previously Presented." Applicants very respectfully request entry of the Amendment and consideration of previously presented Claims 11 and 12. Because previously presented Claims 11-12 depend from Claim 1 and for other reasons, Applicants respectfully submit that previously presented Claims 11-12 are in condition for allowance. Applicants very respectfully request entry of the Amendment, and consideration and allowance of previously presented Claims 11-12.

CONCLUSION

Applicants respectfully submit that Claims 1 and 5-7 are not obvious and are patentable over the combination of Wichgers et al. and Frederick. Claims 4 and 8 have been cancelled, thereby rendering moot their rejections. Applicants very respectfully submit that all

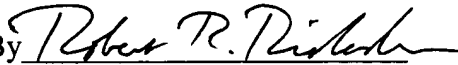
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claims pending in this patent application, including previously presented Claims 11-12, are in condition for allowance. Applicants very respectfully request entry of the Amendment, and reconsideration and allowance of Claims 1 and 5-7 and 9-12 now pending in this patent application.

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Respectfully submitted,

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